



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,580	11/15/2001	Satoru Todate	500.40857X00	7343

20457 7590 07/12/2004

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

AN, SHAWN S

ART UNIT PAPER NUMBER

2613

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,580

Applicant(s)

TODATE ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Preliminary Amendment

1. As per Applicants' instructions received on 1/16/02, claims 1-2, 6-13, 15-17, and 20-26 have been amended.

Drawings

2. The drawings are objected to because on Fig. 2, elements 2-2, 2-4, and 2-6 indicate arrows going in reverse direction. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international

application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b).

Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-3, 9, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al (6,434,197 B1).

Regarding claims 1 and 16, Wang et al discloses an image data conversion apparatus for converting transmitted compressed image data into image data of a different format and displaying the converted image data on a display apparatus, comprising:

a first signal processing unit (Fig. 2, 210; Fig. 8-1, 800, 310) for receiving and decoding the compressed image data;

a recording unit for (145) recording the decoded image data, reading out the image data one line by one line (slice; plurality of macroblocks) at a scanning line period of the display apparatus (col. 8, lines 21-30) under control of the first signal processing unit; and

a second signal processing unit (Fig. 8-2, 805) for converting image data read out of the recording unit to image data of a screen size of the display apparatus (col. 8, lines 21-30).

Regarding claim 2, Wang et al discloses down sampler. Furthermore, down sampler such as a scanning line down sampler inherently down samples (eliminating predetermined number of lines) in a spatial vertical and/or horizontal direction(s) by a designed specification so that image data of a same number of lines as that of display apparatus can be read out from the recording unit.

Regarding claim 3, Wang et al discloses a central processing unit (Fig. 8-2, 350).

Regarding claim 9, Wang et al discloses MPEG-4 compression type (col. 1, lines 54-59).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (6,434,197 B1).

Regarding claim 4, Wang et al does not particularly disclose having an expansion processing section or up-sampler for expanding the inputted compressed data.

However, the Examiner takes Official notice that an expansion processing circuit or an up-sampler is well known in the art for expanding the inputted compressed data.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to incorporate the expansion processing circuit for expanding the inputted compressed data, thereby desired display size could be displayed on the monitor.

Regarding claims 5-6, Wang et al discloses converting formats from a high resolution to a low resolution, e. g., SD to CIF format (Col. 8, lines 21-30). Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to simply reverse the conversion process from the CIF format to SD format such that decoded data is of the CIF type and a size of the image to be displayed on the monitor is a same size as SD Television SDTV, thereby a conventional SDTV can properly display the SD formatted video images without any complications associated with different formats.

7. Claims 7-8 and 17-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (6,434,197 B1) in view of Kim (6,342,923 B1).

Regarding claims 7-8, 17, 20-21, and 24-25, Wang et al does not particularly disclose the conversion section eliminating every sixth line of decoded image data of CIF type.

However, Kim discloses video format converting apparatus including the conversion section converting image data of five lines into image data of 6 lines having a CIF type (Fig. 2).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to incorporate the concept as above as taught by the Kim so that the conversion section eliminates every sixth line of decoded image data of CIF type, so that when one line data is read out from recording unit, the second processing unit adds one line data before at a predetermined ratio to generate image data of one line, thereby same number of lines as that of an odd field and even field are to be displayed on the monitor, thereby a conventional SDTV can properly display the SD formatted video images without any complications associated with different formats.

Regarding claims 18-19, Wang et al discloses converting formats from a high resolution to a low resolution, e. g., SD to CIF format (Col. 8, lines 21-30).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to simply

reverse the conversion process from the CIF format to SD format such that decoded data is of the CIF type and a size of the image to be displayed on the monitor is a same size as SD Television SDTV, thereby a conventional SDTV can properly display the SD formatted video images without any complications associated with different formats.

Regarding claim 22, Wang et al discloses converting formats from a high resolution to a low resolution, e. g., SD to CIF format (Col. 8, lines 21-30).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to simply reverse the conversion process from the CIF format to SD format such that decoded data is of the CIF type and a size of the image to be displayed on the monitor is a same size as SD Television SDTV, thereby a conventional SDTV can properly display the SD formatted video images without any complications associated with different formats.

Note: video signal of 288 lines (CIF) being converted into video signal of 240 lines (SDTV camera) obviously constitutes an image data having both odd and even fields, since a frame comprises of two fields (odd and even).

Regarding claim 23, Wang et al discloses inverse converter including a line memory by which the image data of each line is delayed by one line (Fig. 8-2, 600), and a digital filter (400) for receiving image data of a current line and the image data of one line before from the line memory, multiplying both of the image data by predetermined conversion coefficients, respectively, and adding data resulting from the multiplications (col. 7, lines 54-63; col. 6, lines 13-17).

Regarding claim 26, Wang et al discloses decoded image data being stored in a recording unit (145) and read line by line (slice; plurality of macroblocks).

8. Claims 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (6,434,197 B1) in view of Kanoh et al (5,272,520).

Regarding claim 10, Wang et al discloses an image data conversion apparatus for converting transmitted compressed image data into image data of a different format and displaying the converted image data on a display apparatus, comprising:

a first signal processing unit (Fig. 2, 210; Fig. 8-1, 800, 310) for receiving and decoding the compressed image data in units of the field;

a recording unit for (145) recording the decoded image data, reading out the image data one line by one line (slice; plurality of macroblocks) at a scanning line period of the display apparatus (col. 8, lines 21-30) under control of the first signal processing unit; and

a second signal processing unit (Fig. 8-2, 805) for converting image data read out of the recording unit to image data of a screen size of the display apparatus (col. 8, lines 21-30).

Wang et al does not specifically disclose an inverse converter for converting the image data of each field into an odd field image data and an even field image data.

However, Kanoh et al discloses an inverse converter for converting the image data of each field into an odd field image data and an even field image data (NTSC frame (fields)) (Fig. 1, 11).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to incorporate the concept as above as taught by the Kanoh et al so that the conventional SDTV can properly display the SD formatted (NTSC) video signals without any complications associated with different formats.

Regarding claim 11, Kanoh et al discloses a recording unit (12) reading out the CIF, and a size of image to be displayed on the display apparatus is a same size as SDTV (NTSC) video signal (Fig. 1, final output).

Regarding claim 12, Wang et al discloses inverse converter including a line memory by which the image data of each line is delayed by one line (Fig. 8-2, 600), and a digital filter (400) for receiving image data of a current line and the image data of one

line before from the line memory, multiplying both of the image data by predetermined conversion coefficients, respectively, and adding data resulting from the multiplications (col. 7, lines 54-63; col. 6, lines 13-17).

Regarding claim 15, Kanoh et al discloses a bus (arrow in Fig. 8-2) for connecting the first and second processing units, wherein the recording unit (145) is connected to the bus (Figs. 3-1 to 3-2 to 6 to 8-2), and wherein the image data from the first processing unit is stored in the recording unit and read out at every line to be supplied to the second signal processing unit (Fig. 8-2, 805).

9. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al and Kanoh et al as applied to claim 10 above, and further in view of Kim (6,342,923 B1).

Regarding claims 13-14, The combination of Wang et al and Kanoh et al does not seem to disclose the conversion section eliminating a predetermined number of lines from the decoded image data as that of either one of an odd field and an even field of the display apparatus being read out from the recording unit.

However, Kim discloses video format converting apparatus including the conversion section converting image data of five lines into image data of 6 lines Having a CIF type (Fig. 2).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an image data conversion apparatus as taught by Wang et al to incorporate the concept as above as taught by the Kim so that the conversion section eliminates a predetermined number of lines from the decoded image data as that of either one of an odd field and an even field of the display apparatus being read out from the recording unit, since CIF predetermined lines are same lines as (odd and even) fields, thereby a conventional SDTV can properly display the SD formatted video images without any complications associated with different formats.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A) Terui et al (6,124,881), System for generating composed signals of multiple pictures for use in a video conference system.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Shawn S An whose telephone number is 703-305-0099. The examiner can normally be reached on Flex hours (10).

12. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SSA

Primary Patent Examiner

7/2/04